5   identifying [that at least one of the received indications denote] the start of a flow <u>by</u>

6   <u>analyzing information embedded within at least one received frame</u>;

7   dedicating a receive buffer from a plurality of receive buffers to receive all frames

8   associated with the identified flow; and

9   assigning a pointer value to each frame <u>for storage within a pointer buffer, each pointer</u>

10   <u>value being</u> based, at least in part, on the relative order in which the indications of start of frame

11   transmissions associated with each frame are received, <u>each</u>[the corresponding] pointer value

12   associated with each respective frame being used to preserve a state of frame transmission order

13   <u>without modifying the respective frame</u>.

2.   (Currently Amended) The method of claim 1, wherein identifying the start of <u>the</u> flow

2   includes analyzing information embedded within each of the received frames<u>, the information</u>

3   <u>includes</u> [to determine] <u>one or more of the following:</u> source information<u>,</u> [and] destination

4   information<u>, and quality of service</u> associated with said <u>received</u> frame[s].

1   3.   (Currently Amended) The method of claim 1, <u>wherein prior to assigning the pointer</u>

2   <u>value, the method</u> further comprising determining whether the identified flow requires

3   preservation of transmission order.

1   4.   (Currently Amended) The method of claim 3, <u>wherein prior to assigning the pointer</u>

2   <u>value, the method</u> further comprising promoting frames of the received flow in the order

3   received, unless it is determined flow requires preservation of frame order.

1   5.   (Previously Amended) The method of claim 4, further comprising creating a list of

2   pointer values corresponding to transmission order only if it is determined that the identified

3   flow requires preservation of transmission order.

6.   (Currently Amended) The method of claim 1, <u>wherein prior to assigning the pointer</u>

<u>value, the method</u> further comprising promoting the received frames from the dedicated <u>receive</u>

buffer in the order received, without regard to frame transmission order, unless it is determined

that the identified flow requires preservation of transmission order.

7.   (Original) The method of claim 6, further comprising determining whether the identified

flow requires preservation of transmission order by analyzing protocol identification information

embedded within the received frames.

8.   (Currently Amended) The method of claim 1, wherein the <u>receive</u> buffer order does not

correspond to the order of frame transmission.

9.-20. (Cancelled)

21.   (Currently Amended) A medium having embodied thereon a program for processing by a

network device, the program comprising:

    a module to receive an indication to denote commencement of a flow of frame

transmissions;

    a module to indicate at least one receive buffer to receive all frames associated with the

flow; and

    a module to assign a pointer value to each frame <u>without modification of a frame, the</u>

<u>pointer value being</u> based, at least in part, on the relative order in which the indications of

commencement of frame transmissions associated with each frame are received, the

corresponding pointer value associated with each respective frame being used to preserve a state

of frame transmission order.

1   22.   (Previously Added) The medium of claim 21, wherein the program further comprises a

2   module to promote frames of the received flow in the order received, unless it is determined flow

3   requires preservation of frame order.

1   23.   (Previously Added) The medium of claim 21, wherein the program further comprises a

2   module to assign a pointer value to each frame of the identified flow corresponding to

3   commencement of transmission, creating a list of pointer values corresponding to transmission

4   order only if it is determined that the identified flow requires preservation of transmission order.

1   24.   (Cancelled)

1   25.   (Currently Amended) Adapted for a data network including a plurality of communication

2   links, a method comprising:

3   receiving at least one indication denoting a start of frame transmission on the

4   corresponding plurality of communication links;

5   identifying a received indication denotes commencement of a flow;

6   dedicating a buffer from a plurality of buffers to receive all frames associated with the

7   identified flow;

8   determining whether the identified flow requires preservation of frame transmission

9   order; and

10   assigning a pointer value to each frame without modification of a frame, the pointer value

11   being based, at least in part, on the relative order in which the indications of start of frame

12   transmissions associated with each frame are received, the corresponding pointer value

13   associated with each respective frame being used to preserve a state of frame transmission order.

1   26.   (Previously Added) The method of claim 25, wherein identifying the start of flow

2   includes analyzing information embedded within each of the received frames to determine source

3   and destination information associated with said frames.

1   27.   (Previously Added) The method of claim 25 wherein the relying on the received

2   indications comprises promoting frames of the received flow in the order received, unless it is

3   determined flow requires preservation of frame transmission order.

1   28.   (Previously Amended) The method of claim 25 further comprising creating a list of

2   pointer values corresponding to transmission order only if it is determined that the identified

3   flow requires preservation of frame transmission order.

1   29.   (Previously Added) The method of claim 28, further comprising promoting the received

2   frames from the dedicated buffer in the order received, without regard to frame transmission

3   order, unless it is determined that the identified flow requires preservation of frame transmission

4   order.

1   30.   (Previously Added) The method of claim 25, further comprising determining whether the

2   identified flow requires preservation of frame transmission order by analyzing protocol

3   identification information embedded within the received frames.

1   31.   (Previously Added) The method of claim 25, wherein the buffer order does not

2   correspond to the order of frame transmission.

1   32.   (Currently Amended) A network device comprising:

2   means for receiving an indication to denote commencement of a flow of frame

3   transmissions;

4   means for indicating at least one receive buffer to receive all frames associated with the

5   flow; and

6   means for assigning a pointer value to each frame <u>without modification of a frame, the</u>

      <u>pointer value being based,</u> at least in part, on the relative order in which the indications of

8   commencement of frame transmissions associated with each frame are received, the

9   corresponding pointer value associated with each respective frame being used to preserve a state

10   of frame transmission order.

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1   33.   (Previously Added) The network device of claim 32, further comprising a means for

2   promoting frames of the received flow in the order received, unless it is determined flow requires

3   preservation of frame order.

1   34.   (Previously Amended) The network device of claim 32, further creating a list of pointer

2   values corresponding to transmission order if it is determined that the identified flow requires

3   preservation of transmission order.

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1   35.   (New) The method of claim 1, wherein the receiving of up to the plurality of indications

2   denoting the start of frame transmission includes receiving a plurality of Receive Data Valid

3   signals.

1   36.   (New) The medium of claim 21, wherein the indication to denote commencement of the

2   flow of frame transmissions that is received by the module of the program is a Receive Data

3   Valid signal.

1   37.   (New) The method of claim 25, wherein the receiving of the at least one indication

2   comprises receiving at least one Receive Data Valid signal.

1   38.   (New) A method comprising:

        asserting control signals each denoting commencement of a frame transmission;

        identifying at least one receive buffer to receive all frames associated with the flow; and

        assigning a pointer value to each frame without modification of a frame, the pointer value

being based, at least in part, on the relative order in which the control signals associated with

each frame are received, the corresponding pointer value associated with each respective frame

being used to preserve a state of frame transmission order.